

OSI : open system interconnection :
logical network flow , packets ,

7. Application layer : directly it will connect / interact with data from the user. application web sites/ web application , browsers . (initial communication) .

6. Presentation layer

5. session layer

4. Transport layer

3. network layer

2. data link layer

1. physical layer

	Feature	TCP	UDP
Connection	Requires an established connection		Connectionless protocol
Guaranteed delivery	Can guarantee delivery of data		Cannot guarantee delivery of data
Re-transmission	Re-transmission of lost packets is possible		No re-transmission of lost packets
Speed	Slower than UDP		Faster than TCP
Broadcasting	Does not support broadcasting		Supports broadcasting
Use cases	HTTPS, HTTP, SMTP, POP, FTP, etc		Video streaming, DNS, VoIP, etc

A client types example.com into a web browser, the query travels to the internet and is received by a DNS resolver.

The resolver then recursively queries a DNS root nameserver.

The root server responds to the resolver with the address of a Top-Level Domain (TLD) nameserver.

The resolver then makes a request to the .com TLD.

The TLD server then responds with the IP address of the domain's nameserver for example.com.

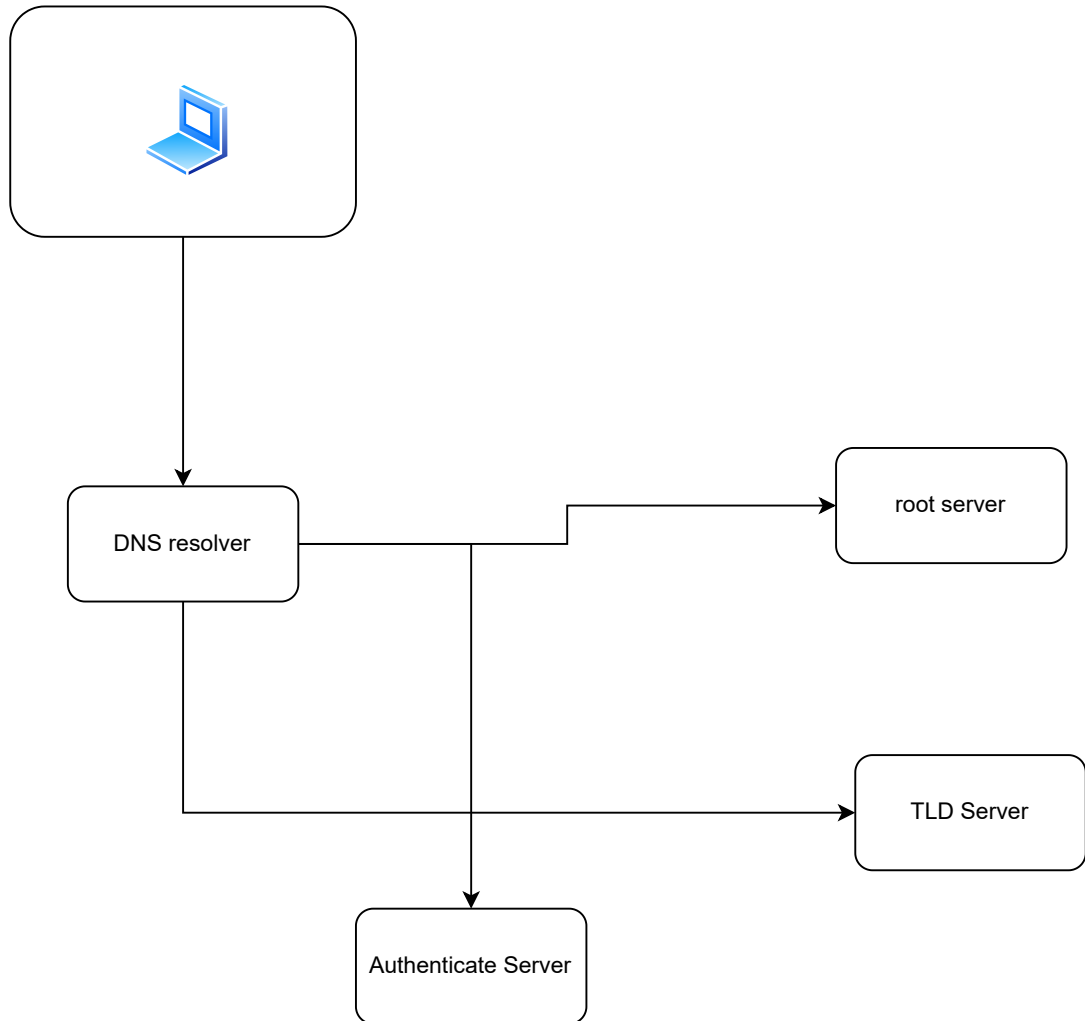
Lastly, the recursive resolver sends a query to the domain's nameserver.

The IP address for example.com is then returned to the resolver from the nameserver.

The DNS resolver then responds to the web browser with the IP address of the domain requested initially.

DNS :

1. Domain name system . to map the names to our ip address .
what ?
how ?
work flow :



1. DNS Resolver : middle ware in between client and DNS nameServer.
2. DNS root server : .com, co.in , co .org
co :
.in : india
3. TLD Server : .uk, .pk, .in, .jp

Load Balancer : distributing the incoming network traffic.
across the multiple resources(server).

workload distribution :

1. host based: distributes on the basis of the requested hostname.
2. path based
3. content based :

OSI : 1. network :
2. application.

types :

1. software cost effective, flexible for configurations. / upgrade/
updates managed cloud services (LB).
2. hardware : on premises : will be handled by a device to cater
the network traffic. cost will be higher.

Routing alog :

